

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the following remarks.

Information Disclosure Statements were filed on January 29, 2002, August 2, 2002 and January 13, 2003, but no return initialed copy of any of the associated PTO-1449's has been provided. The Examiner is kindly requested to provide an initialed copy of the PTO-1449 to the undersigned by facsimile.

The Office Action reiterates the rejection of claims 31-35 under 35 USC 102(b) as anticipated by Mahany et al. The Applicants respectfully traverse.

The present invention is directed to a transmission rate control apparatus and a base station apparatus provided with a transmission rate control apparatus (claims 31-34). The transmission rate control apparatus includes reception circuitry that receives a received quality measured at a communication terminal and transmission rate control circuitry that changes a transmission rate to the communication terminal based on the received quality, wherein the transmission rate control circuitry decreases the transmission rate when the received quality at a side of the communication terminal deteriorates. After the transmission rate control circuitry decreases the transmission rate when the received quality at a side of the communication terminal

deteriorates, the transmission rate control circuitry changes the transmission rate to an original value when the received quality at the side of the communication terminal subsequently improves (claims 32 and 34). The present invention is also directed to a communication terminal apparatus comprising monitor circuitry that monitors a received quality, judgment circuitry that judges whether the received quality deteriorates, and transmission circuitry that transmits the received quality at a timing at which said judgment circuitry judges that the received quality deteriorates (claim 35).

It is well settled that anticipation exists only if (1) all claim elements, (2) are identically set forth, either expressly or inherently, (3) in a single prior art reference. *Mehl/Biophile International Corp. v. Milgram*, 192 F.3d 1362, 1365 (Fed. Cir. 1999). Mahany lacks disclosure of subject matter of claims 31-35 and thus does not anticipate these claims.

Mahany merely discloses a mobile communication system wherein a base station maintains RF communication with mobile units using a polling protocol which may communicate at a higher or lower data rate, depending on the channel conditions. The base station transmits a general polling message at the lower data rate, and, associated therewith, transmits a test pattern for evaluation by the mobile units. The test pattern can be associated with a query from a mobile unit having a message to send, or with a contention

polling message from the base station. Upon receipt of the transmissions, the mobile units analyze the test pattern to determine whether communication at the higher data rate is possible. Based on the determination, the mobile units select the appropriate rate to transmit data messages. As described at col. 14, line 67 et seq., col. 21 line 60 et seq. and shown in Fig. 12, the mobile station derives a signal quality indication of the test signal from the base station for use in making the data rate selection decision, then switches to transmit at the standard rate, and communicates its data rate selection to the initiating unit. The mobile unit then switches to receive at the data rate which it has selected. The base station, upon receipt of the return handshake, switches to transmit its message at the data rate selected by the mobile unit.

From the above, it is apparent that Mahany discloses a system wherein a mobile station evaluates the test pattern transmitted by a base station to determine whether higher rate communication is possible and the mobile station transmits its data rate selection decision to the base station.

This is not at all like the present claimed invention wherein reception circuitry of a transmission rate control apparatus (e.g. in a base station apparatus (claim 33)) receives a received quality measured at a communication terminal (e.g. mobile station), and a

transmission rate control circuitry changes a transmission rate to the communication terminal based on the received quality, and decreases the transmission rate when the received quality at a side of the communication terminal deteriorates.

For example, present claim 33 defines a base station having a transmission rate control apparatus that receives a received quality measured at a communication terminal and, based thereon, changes the data rate, whereas Mahany describes a mobile station that decides the data rate and a base station that receives a data rate selection decision signal from the communication terminal.

The office action states that, in Mahany, the remote unit responds to the polling signal from the base station and transmits as its response a selection signal specifying the data rate, and, at the base station, a control means responds to this selection signal and automatically switches among plural data rates to adaptively select the best data rate dynamically according to changing operating conditions. The office action proposes that the aforementioned control means of Mahany constitutes the transmission rate control circuitry of the present claims. The Applicants respectfully disagree.

Although the description in the office action may suggest that the control means at the base station adaptively selects the data rate according to changing channel conditions, the Applicants note

that the base station does not select the transmission rate but merely transmits in accordance with the data rate selected by the mobile station.

The Applicants note that the present claims call for the transmission rate control apparatus to receive a received quality measured at a communication terminal, whereas, in Mahany, the first station (e.g. base station) receives a rate indication signal indicating a rate selection decision already made at the second station (e.g. mobile station) based on received signal quality or strength.

In Mahany, the mobile station makes the measurement and decides the rate, and the base station does not determine or decide the rate but merely responds to the rate already selected by the second station.

In contrast, in the present claimed invention, the communication terminal measures the received quality, and the rate control apparatus receives the measured received quality and changes the rate based thereon.

During the interview of March 25, 2003, the Examiners proposed that the communicated "data rate selection" of col. 22, lines 25-26 of Mahany contains an indication of the measured quality at the target unit and thus the Examiners deemed the "data rate selection" as anticipating the "received quality measured" in the present

claims. However, as stated during the interview and in Applicants' Interview Summary filed April 4, 2003, to support a position that the "data rate selection" inherently includes an indication of the "received quality measured," MPEP 2112 requires that such an inherency position be supported by "objective evidence" or "cogent technical reasoning" of why the allegedly inherent subject matter is necessarily or inevitably present, and not merely possibly present, in the cited reference. If the present rejection is reasserted in a subsequent PTO communication, the Applicants respectfully request clarification of whether the rejection is based on inherent or express anticipation so that the Applicants may determine whether a Declaration to rebut inherency is warranted.

On the issue of inherency, the Applicants note that Mahany is silent on the basis for deriving the data rate selection signal and leaves open more than one possibility. One such possibility left open by Mahany's silence is that the data rate selection decision is based on the measured signal quality, the priority of the particular mobile station and the projected degree of congestion of the entire communication system. Under this scenario left open by Mahany's silence, a decision of low data rate may be based upon low mobile station priority or projected high system congestion even though the measured link quality is high. In this case, it is

impossible to determine from the data rate signal anything about channel quality. This is one of several different possibilities left open by Mahany's silence that show lack of inherency.

Thus, an inherency rejection based on Mahany is clearly unwarranted because the communicated "data rate selection" of Mahany does not always or inevitably, as opposed to merely possibly, include an indication of measured signal quality.

From the above, it is submitted that an anticipation rejection based on Mahany is clearly unwarranted.

Accordingly, it is submitted that the 35 USC 102 rejection of claims 31-34 over Mahany should be withdrawn.


Furthermore, it is submitted that Mahany fails to teach the subject matter of claim 35 which recites a communication terminal apparatus comprising monitor circuitry that monitors a received quality, judgment circuitry that judges whether the received quality deteriorates, and transmission circuitry that transmits the received quality at a timing at which the judgment circuitry judges that the received quality deteriorates.

Accordingly, it is submitted that the 35 USC 102 rejection of claim 35 over Mahany should be withdrawn.

It is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may be best resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

  
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